Field Report Redwood National and State Parks

■ 1.0 Summary

Redwood National and State Parks (RNSP) are located along the Pacific coast in the north-ernmost part of California. The parks' joint designation as World Heritage Site and International Biosphere Reserve reflects the unique and valuable natural resources protected within. The public law that established Redwood National Park states that the park was established, "...in order to preserve significant examples of the primeval coastal redwood (Sequoia sempervirens) forests and the streams and seashores with which they are associated for purposes of public inspiration, enjoyment, and scientific study, there is hereby established a Redwood National Park in Del Norte and Humboldt Counties, California." Many of the diverse sites and attractions within RNSP are served by trails and trailheads which are not easily accessible without a private auto. In addition, some of the roadways themselves within RNSP constitute scenic attractions, with a number presenting challenging driving conditions. Finally, some of the more popular trailhead parking areas reach capacity and cannot be expanded without harming the natural environment.

There is currently a moderate need for an Alternative Transportation Systems (ATS) that would connect some or all of the RNSP trailheads and access points. This type of service would best be provided in smaller vans or open vehicles that can negotiate the area's narrow, winding roads. At least two specific ideas for ATS have been discussed. One involves an old railroad right-of-way in the vicinity of Crescent City that is partly owned by the County and the State Parks Department. The type of vehicle proposed for the rail right-of-way would be some sort of open-air, rubber tired train, similar to those in use at Yosemite National Park that would allow for sightseeing of the tall trees along the way. Another ATS idea is a shuttle serving kayakers on the Smith River. The more general concept of a shuttle connecting more distant parts of RNSP has also received some thought. The private transit operator under contract to the regional transit agency or other public entity would likely operate such a service. While specific shuttle stop locations have not been identified, it is likely that a shuttle or shuttles would travel along the more scenic roads and stop at trailheads and visitor information centers. In addition to serving hikers and sightseers, a bicycle shuttle service would also be useful.

Visitation patterns and the economics of providing such a system suggest that the ATS will need to be largely, if not entirely, subsidized in its operations. In addition, development and operation of the ATS would require coordination among the city, the county, and RNSP, and possibly local businesses. While the current transportation needs are not acute, plans to develop more visitor facilities in the future may at some point increase the need for an ATS.

■ 2.0 Background Information

2.1 Location

The RNSP are located on the coast of northern California along an approximately 40-mile stretch of Highway 101. RNSP headquarters are located in Crescent City, which is equidistant (about 350 miles) from San Francisco, California and Portland, Oregon. The city of Eureka is about 40 miles south of the Redwood Information Center on Highway 101. Figure 1 shows the general location of RNSP.

5 Nat. Pk Gold Grants Pass Beach Klamath -Medford Falls Brookings 199 Oregon Ashland California Crescent-Smith River City NRA Lava Redwood Beds National-5 Natl. & State Parks Mon. Shasta-T**/**initγ Arcata Nat. Rec/ Area Eureka 299 Lassen Volcanic Whiskeytown NRA Nat. Pk. Redding 101 40 Miles Red Bluff 40 60 Kilometers

Figure 1. Location of the Redwood National and State Parks

2.2 Administration and Classification

RNSP is cooperatively managed by the NPS and the California Department of Parks and Recreation. It is comprised of three state parks and one NPS unit. Redwood National Park was established in 1968 and expanded in 1978. Prairie Creek Redwoods State Park was established in 1923, Del Norte Coast Redwoods State Park in 1925, and Jedidiah Smith Redwoods State Park in 1929. Together, the park units are designated as a World Heritage Site and International Biosphere Reserve.

2.3 Physical Description

Visitor attractions and park units of RNSP can be grouped into five distinct areas:

- Entering the Parks from the northeast on U.S. Highway 199, the traveler encounters the Hiouchi Information Center and Jedidiah Smith Redwoods State Park, which contains a campground. The Stout Grove and Howland Hills road are also located in this area.
- The park headquarters, Crescent Beach, the Crescent Beach Overlook, Enderts Beach, the Coastal Trail, and Del Norte Coast Redwoods State Park are situated in and around Crescent City.
- A number of attractions are centered around the Klamath Area, about 15 miles south of Crescent City. These include False Klamath Cove, Lagoon Creek, Requa Road, and Coastal Drive, a narrow partially paved scenic drive.
- About 25 miles south of Crescent City on Highway 101 is the Prairie Creek Area.
 Attractions here include Prairie Creek Redwoods State Park, home of a herd of Roosevelt elk, Lost Man Creek, and Fern Canyon. There are campgrounds in both the State and National Parks portions of this area. Newton B. Drury Scenic Parkway, a scenic byway off of Highway 101, passes through Prairie Creek State Park to rejoin the highway further south.
- A number of park facilities and attractions are also grouped around the small town of Orick, towards the RNSP southern boundaries. These include the Lady Bird Johnson and Tall Trees Groves, the Redwood Creek Trail, the Redwood Information Center, Freshwater Spit, and the Bald Hills Area. A new trailhead is under development in this area at Davison Ranch that will feature comfort station and parking facilities, picnicking, hiking, biking, and elk observation.

The general location of various sites and park units within RNSP is shown in Figure 2. Figures 3 through 5 provide a more detailed view of the northern, central, and southern thirds of the area.

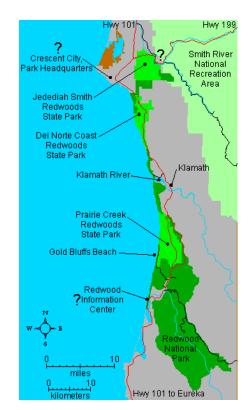
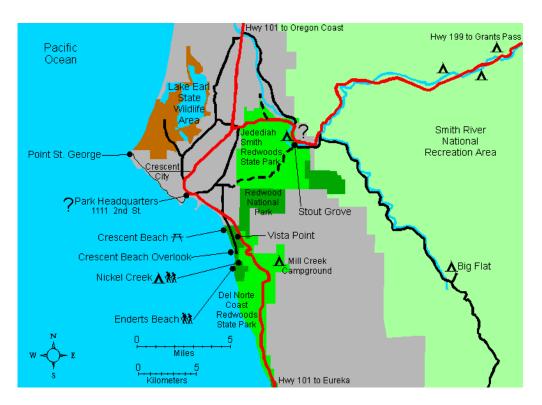


Figure 2. Overview of Redwood National and State Parks

Figure 3. RNSP Northern Area





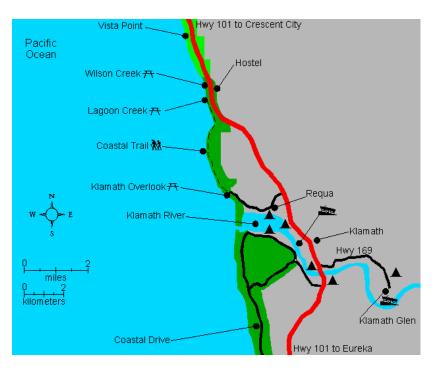
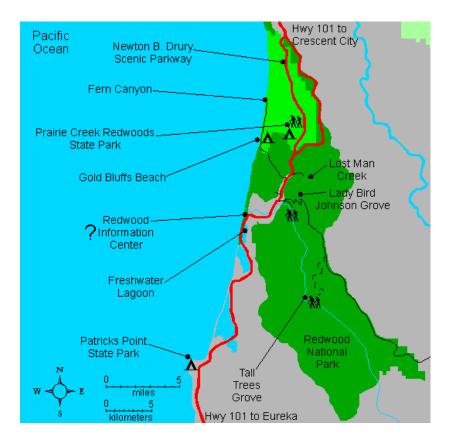


Figure 5. RNSP - Southern Area



2.4 Mission and Goals

As stated in the RNSP joint general management plan, broad conceptual goals for the parks' management are to preserve and protect the parks' resources, to provide for the public enjoyment and visitor experience of the parks, and to ensure organizational effectiveness. The Interpretive Prospectus for RNSP also provides statements of purpose for each of the park units, two examples of which are cited below.

The statement of purpose for Jedidiah Smith Redwoods State Park is, "to make available to people forever, for their inspiration and enjoyment, in a condition of unimpaired ecological integrity, the great forests of lower Mill Creek and of the Smith River, together with all related scenic, historic, scientific, and recreational values and resources of the area."

The public law that established Redwood National Park states that the park was established, "...in order to preserve significant examples of the primeval coastal redwood (Sequoia sempervirens) forests and the streams and seashores with which they are associated for purposes of public inspiration, enjoyment, and scientific study, there is hereby established a Redwood National Park in Del Norte and Humboldt Counties, California."

Up until recent years, the first priority at Redwood National Park was resource restoration. Now, with significant progress made towards restoration goals, the park management is focusing more attention on the development of visitor facilities as well as the visitor experience. For example, plans for the Davison Ranch site include restrooms, a picnic area, hiking and bicycle trails, and parking lots. At the same time, however, park officials are wary of promoting increased use of other sites due to limited parking and other constraints.

2.5 Visitation Levels and Visitor Profile

In recent years, Redwood National Park has received between 400,000 to 500,000 annual visitors as shown in Table 1. Overnight stays in Redwood National Park, including visitors staying in concession lodging, RVs and campgrounds, were estimated at between 65,000 and 95,000 for this period (1990 to 1994). Table 2 lists visitor statistics to the state park units within RNSP for the years 1990 through 1994. These show that another 700,000 to 800,000 visitors came to the state park units bringing the combined visitation to RNSP to about 1.4 million in 1994.

Table 1. Visitation to Redwood National and State Parks

	Redwood N	National Park	Redwoods State Parks				
Year	Total Visitation	Overnight Stays	Del Norte Coast ¹	Jedidiah Smith¹	Prairie Creek ¹	Total State Parks	Total RNSP
1990	348,458	N/A	66,248	151,092	550,227	767,567	1,116,025
1991	366,280	N/A	67,677	112,847	592,910	773,434	1,139,714
1992	387,781	N/A	75,022	141,392	468,599	685,013	1,072,794
1993	421,027	N/A	83,490	182,471	559,757	825,718	1,246,745
1994	475,0331	N/A	102,381	195,520	440,092	737,993	5,488,324
1995	502,6492	74,395 ²	N/A	N/A	N/A	N/A	N/A
1996	426,9382	93,7742	N/A	N/A	N/A	N/A	N/A
1997	383,1922	87,255 ²	N/A	N/A	N/A	N/A	N/A
1998	383,2572	66,2982	N/A	N/A	N/A	N/A	N/A

Sources: ¹Draft General Management Plan.

²Fax from National Park Statistics dated August 2, 1999.

Table 2. Peak Month Traffic Counts¹ at Selected Redwood National Park Trailheads and Access Points

Year	Enderts Beach	Klamath Overlook	Lagoon Creek	Coastal Drive	LBJ Grove Trailhead	Redwood Creek Trailhead
1995	10,501	7,945	8,148	6,956	19,142	2,272
1996	9,613	8,617	5,812	7,617	16,725	3,601
1997	8,214	5,075	6,198	0^{2}	17,745	3,968
1998	8,880	5,328	6,510	6,793	16,882	4,101

Source: Redwood National Park fax dated August 2, 1999.

Notes: ¹Traffic counts are for the month of August and represent vehicle trips to and from the locations (i.e., a vehicle entering and exiting is counted only once).

²Closed due to damage.

RNSP has been characterized as a "drive-through" park, but there is a desire on the part of park management to make it more of a destination. Visitation is very seasonal and heavily concentrated in the summer months from June through September. Visitation is relatively light in the winter months when the area receives a good deal of rain. The lowest visitation month is in January.

Both the length of stay and the visitor profile vary significantly from site to site within RNSP. The southern half of RNSP tends to be driven through while visitors are more likely to stay a day or two in the northern area. Visitors to RNSP are fairly diverse and have been characterized as falling into several groups. These include young couples, retired couples, family groups (both with young children and teenagers), and enthusiasts (teachers, professionals, park employees).

A visitor survey taken at Redwood National Park in July of 1993 showed that most visitors (71 percent) came with their families and were first-time visitors to the park (65 percent). The predominant age groups were 36 to 50 years old (30 percent) and 15 years or younger (21 percent). People from foreign countries accounted for 15 percent of all visitors. Of the foreign visitors, 42 percent came from Germany and 19 percent from Canada. Visitors from the United States tended to come from California (40 percent) and Oregon (10 percent).

An earlier visitor use survey was conducted at Redwood National Park during the 1987-1988 season. At that time, day users stayed within the park for three and one-half hours on average. Overnight users stayed on average 46 hours, although not all of these hours were spent inside the park. Twenty-four hours was the average time actually spent within in park per overnight stay.

■ 3.0 Existing Conditions, Issues, and Concerns

3.1 Transportation Conditions, Issues and Concerns

The transportation issues at RNSP are largely related to its layout with destinations that are strung along some 35 miles of Highway 101 and the near total dependence of visitors on private autos to reach its attractions. Trailhead access is also important since RNSP has been characterized as a "park of trails." The basic transportation issues at Redwood might be summarized as follows:

- There is a need for the casual visitor to the area to more easily find and experience some of its attractions. Many of the access roads are not easy to find or drive on. Often, park staff find that visitors drive straight through on Highway 101 and then stop and ask where the "big trees" are located.
- Visitors need to be able to move to various attractions and destinations within the Parks without exclusive reliance on private vehicles. During peak periods, trailhead parking lots at the more popular attractions, such as the Lady Bird Johnson Grove (see Figure 6), can fill up (see Table 2). Trailhead parking is limited, and will remain so to protect natural resources. Plans to develop more visitor facilities may result in increased pressure on trailhead parking.

Figure 6. Parking at Lady Bird Johnson Trailhead



- Roadway conditions present safety and access issues at some locations. Several of the Parks' primary attractions can be reached only via narrow, winding, and/or unpaved roads. Vehicles with trailers and motor homes are typically not advised on these roads. While some of these roadway facilities can be better maintained, none could be upgraded without significant negative impact to the natural resources. Examples of these conditions include the following:
 - Howland Hill Road, a narrow gravel road that passes through old growth redwoods leading to the Stout Grove;
 - A scenic, unpaved road on which trailers are not advised provides the only access to Lost Man Creek;
 - A narrow, gravel access road from Bald Hills Road leads to the Tall Trees Grove trailhead; the number of visitors to the Tall Trees trailhead is limited by a combination-locked entrance gate - visitors must obtain passes with the day's combination at the Redwood Information Center; and
 - At least one scenic road, Coastal Drive (see Figure 7), itself constitutes an attraction; the road is deteriorating and driving conditions here are difficult; the road may soon be converted to one-way travel.

Figure 7. View of Coastal Drive



- There are conflicts between through traffic and sightseeing traffic on Highway 101 as it passes through Del Norte Coast Redwoods State Park and on Highway 199 through Jedidiah Smith Redwoods State Park. Some conflicts with bicycle traffic exist as well. Visitors are tempted to pull over to view the impressive trees in these corridors but there is a lack of safe places to do so.
- There are conflicts between wildlife and traffic movement. Davison Ranch is a recently acquired site slated for development of more visitor facilities. When the ranching operations ceased at this location, a herd of Roosevelt Elk moved in, creating an attraction. Park visitors and others traveling on Highway 101 often create traffic hazards by parking on narrow highway shoulders or within the roadway along Davison Road. This particular condition will likely be addressed by the preferred alternative for development of visitor facilities at the site. Elk also present a safety hazard at times on the scenic bypass to Highway 101.
- There is a need to expand access to the Parks for people who do not have the use of a private vehicle.

Traffic Counts

Table 2 reports traffic counts taken at selected Redwood National Park locations. These counts were taken in the month of August over the last few years and give an idea of the level of demand at various points. While traffic at most of the sites seems to have decreased since 1995, trips to the Redwood Creek trailhead have increased. The numbers reported in Table 2 represent person trips. A multiplier of 2.7 persons per vehicle was used to adjust the number of vehicles crossing automatic traffic recorders (tube counters) or electric eyes. For example, an estimated 16,882 people visited the Lady Bird Johnson Grove trailhead in 1998. This figure represents an average of 545 visitors per day or about 200 vehicle trips.

Existing Transit Service

Redwood Coast Transit (RCT) is the transit agency in the Crescent City area. The actual operation of RCT's services is contracted out to a private company, Paratransit Services Paratransit is a company that can enter into individual contracts to manage different transportation services. The current service contract with Crescent City and Del Norte County is for three years on the basis of a fixed fee plus service hours. RCT provides one fixed route with two round trips per day between Crescent City and Klamath, near the midpoint of RNSP. There is no transit service south of Klamath or to/from northern Humboldt County. The southern half of RNSP does not currently receive any regularly scheduled transit service.

In addition to fixed route service, RCT provides dial-a-ride services in and around Crescent City. Del Norte County owns the 25-passenger minivans used for both the fixed route and dial-a-ride services. However, Paratransit Services also own some larger equipment for its own charter business line.

Although RCT publishes a brochure encouraging hikers to use the system to reach trail-heads, current ridership appears to consist largely of park employees. The brochure shows the main park facilities, states that bus drivers will stop at any trailhead along the route, and mentions that the buses are equipped with bicycle racks. The regular adult fare is \$1.50, although the cost per passenger trip has been recently estimated to be about \$5.00.

Previously Existing Shuttle Bus

The NPS sponsored a shuttle bus operation during the early to mid 1980s. The shuttles were operated by a local company, North Coast Redwood Tours, Inc. and ran from June through September. The service operated from the Redwood Information Center near the town of Orick to the Tall Trees trailhead and back, with several stops along the way. The route was about 32 miles round trip. Service was provided in vans with a seating capacity of 15 and vans departed about once an hour from the Visitor Center. Records show that the Park Service paid about \$50,000 for 93 calendar days of service in 1982 and \$72,000 for 128 days of service in 1981. At some point, the private operator no longer found the arrangement profitable and the service was discontinued.

3.2 Community Development Conditions, Issues and Concerns

As mentioned above, several motels and private campgrounds in and around Crescent City have expressed interest in starting a new shuttle service. Local businesses are interested in the system serving points around town as well as Jedidiah Smith State Park. A shuttle serving all or parts of RNSP could contribute to local economic development goals by encouraging visitors to stay longer in the area and patronize local businesses. The communities of Orick and Klamath could benefit from a shuttle system as well.

3.3 Natural and Cultural Resource Conditions, Issues and Concerns

RNSP protect old growth coastal redwoods, including some of the world's tallest and oldest trees. Less well known but also significant are prairies and oak woodlands as well as coastal and marine ecosystems. RNSP contains 33 miles of scenic Pacific Ocean coastline and 110,000 acres of coastal topography. Park landscapes represent over 150 years of land use practices by non-indigenous peoples (fishing, mining, logging, and ranching). More than a third of the of the lands within the parks have been logged and are undergoing an internationally recognized restoration program, which involves removal of old logging roads and watershed restoration, among other activities.

The Interpretive Prospectus for RNSP identifies the following additional areas of significance of the parks:

- Preservation of the largest remaining contiguous section of ancient coastal redwood forest;
- Preservation of the legacy of the 19th and 20th century conservation efforts which led to
 establishment of three state parks in the 1920s, a national park in 1968, and expansion
 of the national park in 1978;

- A rich variety of biotic communities from the Pacific Coast to the interior mountains, many of which are refuges for rare and endangered species; and
- The four native cultures with ties to RNSP including the Tolowa, Yurok, Chilula, and Hupa.

3.4 Recreation Conditions, Issues and Concerns

Recreation areas are diverse and spread throughout RNSP. Recreation opportunities in the parks include car camping, primitive camping, hiking, backpacking, horseback riding, mountain biking, fishing, and picnicking. There are five developed campsites within the RNSP, one that is open only during the summer. There are also three locations that offer primitive, walk-in, or equestrian camping. A number of private campgrounds and RV parks are located nearby.

A 1993 visitor use survey showed that the most visited sites in RNP were Crescent Beach (56 percent of visitors), Elk Prairie Parkway (54 percent), Lady Bird Johnson Grove (40 percent), Klamath Overlook (36 percent), the Coastal Drive (33 percent) and the Tall Trees Grove (32 percent). Although most visitors (59 percent) spent less than one day in the park, 25 percent stayed two to three days. Activities reported by visitors included sight-seeing (91 percent), walking or hiking for two hours or less (64 percent), wildlife or bird viewing (39 percent), picnicking (36 percent) and beach combing (34 percent).

4.0 Planning and Coordination

4.1 Unit Plans

A joint federal and state General Management Plan/General Plan (GMP/GP) is expected to be approved by the spring of 2000. The draft proposed alternative would emphasize resource protection and visitor use, preserving and protecting the parks' significant natural and cultural resources while stressing restoration where sensitive resources are at risk. New visitor services and facilities in the parks will be provided as long as sensitive resources are not affected. As part of the preferred alternative, a new primary Visitor Center will replace the existing Redwood Information Center but only if it becomes severely damaged. A new facility combining the functions of the Hiouchi Information Center and Jedidiah Smith Visitor Center will also be built.

The GMP/GP will establish eight management zones to guide the management of park areas. One such management zone was the "Transportation Zone" which covers the corridor of the paved state highways. Guidelines for this management zone state that the protection of ancient redwood forests would be of paramount importance, and that the corridor should be as narrow as possible but wide enough to accommodate the development of safety pullouts, scenic overlooks, trailheads, and interpretive exhibits. The desired visitor experience in this zone would depend on a motorized vehicle or bicycle but

recognizes that portions of the highways, especially Highway 101, are not suitable for bicycle travel.

Objectives for visitor access and circulation are also addressed in the proposed alternative. Among the objectives are to provide safe opportunities for visitors to access trails and recreation facilities, to ensure that RNSP roads relate harmoniously to the topography and environment, to provide ATS, develop one-way roads, and set vehicle size limits, as appropriate to ensure public safety and visitor enjoyment. Also mentioned is the limitation of parking and use of mass transit to limit the number of vehicles visiting "fragile" sites. Examples of some of the specific actions in the proposed alternative pertaining to transportation facilities within the parks include:

- **Greater Coastal Drive** Keep as two-way, unpaved road and convert to trail if major road failure occurs;
- Tall Trees Grove and Lady Bird Johnson Grove Redesign parking areas to correct aesthetic problems but maintain current capacity; manage visitor use; and
- **Bald Hills Road** Develop and maintain as rural gateway to diverse natural and cultural landscapes.

Suggestions made by the public during the comment period for the joint plan but deemed beyond its scope, included provision of more bus service and provision of shuttle service to various locations within the parks.

The Davison Ranch Development Concept Plan includes at least one provision that is relevant to alternative transportation use. The Davison Ranch site is located near several popular visitor destinations including the Lady Bird Johnson Grove, Gold Bluffs Beach, and Fern Canyon. A proposed new trail would connect with the Bald Hills trail system. The new trailhead could provide adequate parking for visitors wishing to hike into the Bald Hills area as well as functioning as a hub for a shuttle bus operation. The site benefits from adequate parking space and level terrain, and would be accessible even to larger vehicles. The proposed parking lot would include spaces for autos as well as oversized vehicles with room for further expansion.

4.2 Public and Agency Coordination

Redwood National Park straddles the border of two counties. The northern half of the park falls in Del Norte County while the southern half is in Humboldt County. In the opinion of park officials, this situation presents an obstacle to planning of alternative transportation. Park officials also mentioned the need for coordination with the adjacent Smith River National Recreation Area, which borders Jedidiah Smith State Park to the northeast.

5.0 Assessment of Need for ATS

5.1 Magnitude of Need

As there are currently no acute transportation issues at RNSP, there is only a moderate need for ATS implementation. However, the need for ATS is likely to increase in the future as visitation levels rise and additional visitor facilities are developed. In particular, the National Park portion of RNSP appears to be transitioning from a resource restoration focus to more emphasis on visitor enjoyment. Thus, it is not too soon for RNSP to begin planning for a potential ATS.

The benefits of ATS would include the following:

- Improved access for the mobility-impaired or those lacking private autos;
- A more enjoyable experience for visitors who would be relieved of the task of negotiating difficult roads;
- Safety and other benefits resulting from fewer vehicles on the narrow, winding roads;
- Reduced pressure on trailhead parking lots; and
- Potential support for local economic development goals.

The chief obstacles to implementation of an ATS at this site would appear to be the need for funding and the level of coordination required. Park officials cited a potential for cooperation among the city, the county, and RNSP but also stated that the impetus would have to come from the county. Due to the seasonal nature of visitation to the area, it is unlikely that a private operator would find operation of an ATS sustainable as a primary line of business. In the past, the NPS has granted concessions such as a hay wagon ride but the concessionaire has been unable to survive the off-season. There is also the example of the previously existing shuttle service that was discontinued.

The most feasible approach to providing and funding an ATS would likely involve a service provided under contract through the local transit operator. In this case, a public agency would probably have to own the vehicle or vehicles, and provide for vehicle storage during the off-season. With respect to funding, there does not appear to be any potential for public funding at this point in time. However, local motels and other businesses have expressed interest in providing a shuttle service, and might be willing to contribute towards its operation if a public agency were to coordinate the service. A scenario involving a new public funding source with contributions from private businesses might be workable.

5.2 Feasible Alternatives

At least two specific ideas for ATS have been discussed. One involves an old railroad right-of-way in the vicinity of Crescent City that is partly owned by the County and the State Parks Department. The Save-the-Redwoods League, a conservation organization

devoted to preserving redwoods, is trying to purchase additional right-of-way. This right-of-way passes near the Stout Grove, and could potentially offer an alternative to Howland Hills Road as a means of access. (There is some confusion as to the exact right-of-way that is being studied here. However, there appear to be several options. This idea is only in the earliest planning stages and is included as an example of the type of ATS that might be feasible.)

The type of vehicle proposed for the rail right-of-way would be some type of open-air, rubber tired train, similar to those in use at Yosemite National Park. This type of vehicle would allow for sightseeing of the tall trees along the way. An ATS utilizing the rail right-of-way would require considerable resources to develop parking facilities at the embarkation point. However, such facilities might be coordinated with Crescent City's economic development efforts, such as a proposed new visitor and information center.

Another specific idea for ATS would involve a shuttle service for kayakers on the Smith River, which runs through J. Smith State Park and the adjacent Smith River National Recreation Area. The Smith River is one of the few rivers in the West that is not dammed and there are limited put-in spots. There are opportunities for family-level kayaking within the State Park boundaries but more challenging waters further up the river. There is currently no regularly scheduled river shuttle known to be operating but apparently some shuttles are arranged on an informal basis. For example, the current rate for a shuttle to the North Fork, which involves someone driving a private vehicle back a distance of 25 miles, is \$40 per vehicle. The seasonality of the boating demand, the unpredictability of water flow (which depends upon the season's rain), and the distances involved all present challenges to implementation of a regularly scheduled kayak shuttle service. In addition, shuttle vehicles would have to accommodate boats and other gear.

The more general concept of a shuttle connecting more distant parts of RNSP has also received some thought. The private transit operator under contract to the regional transit agency or other public entity would likely operate such a service. The vehicles used for such a service would likely be small, given the likely level of demand and the need to maneuver on difficult roads. While specific shuttle stop locations have not been identified, it is likely that a shuttle or shuttles would travel along the more scenic roads (Howland Hills Road, Bald Hills Road, Coastal Drive, Newton P. Drury Scenic Parkway) and stop at trailheads and visitor information centers. In addition to serving hikers and sightseers, a bicycle shuttle service would also be useful, as the existing bicycle trails are not well linked. Thus, vehicles should also include bicycle racks.

Representatives of Paratransit Services have expressed interest in providing some type of shuttle service to RNSP attractions. The firm has received calls from motels, the Chamber of Commerce, and private campgrounds interested in starting a shuttle service. However, none of the interested parties have identified a mechanism for funding a service. In addition, Paratransit's current operating permit does not allow the firm to proactively start such a service. Without obtaining a more costly Public Utilities Commission operating permit, Paratransit can only operate such a service at the request of the city or county. Typically, for its charter business, Paratransit charges about \$35 per hour for local service and \$18 per hour for standby time for the small buses. For larger buses, the comparable rates would be between \$52 and \$72 per hour.

RCT currently has a seasonal ridership with the Crescent City area peaking during the school year and ebbing during the summer, an opportunity to serve Park visitor demand. However, while the County and City are interested in exploring ideas for linking the Parks with the public transportation system, they are limited by public subsidy regulations and the financial ability to provide this type of service. For example, the existing bus service is able to serve hikers and stop at trailheads only as long as it also provides a "commuter" service to Park employees at Requa.

■ 6.0 Bibliography

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Monthly traffic and electric eye counts by location for Redwood National Park.

■ 7.0 Persons Interviewed

Richard Schneider, Chief of Maintenance, Redwood National Park
Dave Gray, Projects Manager, Redwood National Park
, California Department of Parks and Recreation
Marjorie Sharp, Paratransit's General Manager for Redwood Coast Transit service
Susan Morrison, Del Norte County Transportation Commission